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ENVIRONMENTAL HEALTH

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Mr. Derek Robinson
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Subject: **SFDPH Comments on the Draft Radiological Data Evaluation Findings Report for Parcels D-2, UC-1, UC-2, and UC-3 Soil, Former Hunters Point Naval Shipyard, San Francisco, California, Dated October 2017**

Dear Derek:

General Comments:

1. We understand that the Navy will also consider all comments received on the Findings Report for Parcels B and G soil; therefore, relevant comments have not been duplicated in this letter.

Specific Comments

1. **Section 4, Findings and Recommendations:** We note that based on the 2004 Historical Radiological Assessment (HRA) conclusion that Building 813 drainage systems are not impacted, the removal actions at Parcel D-2 survey units (SUs) 31, 32, 34, 35, 38, 134, and 135 were conservative and likely superfluous. Water flow in storm drains would have been away from Building 813 and Parcel D-2 (formerly in Parcel A) as shown on RI Figure 4.21-1A (attached). Similarly, sanitary sewers would carry sewage away from Building 813, presumably to the pump station at Building 819. Therefore, there would have been no complete pathway for radiological contamination from elsewhere at HPNS to have impacted Parcel D-2 or Building 813 via the storm drain and sanitary sewer system; this conclusion would remain valid even for a prior combined sewer system at D-2. Nevertheless, during the removal action the Navy identified elevated Radium-226 (Ra-226) activity in soil at up to 3.1843 picocuries per gram (pCi/g) and Cesium-137 (Cs-137) activity in manhole sediment at up to 0.23231 pCi/g. While the Navy previously concluded that Ra-226 and Cs-137 detected in soil and manhole sediments was consistent with the conceptual site model (CSM) for the radiologically impacted storm drain and sanitary sewers at HPNS, there was no apparent source of contamination from Building 813. Those radionuclides are inconsistent with the known radiological materials stored at Building 813 (a leaking 300-microcurie [µCi] Strontium-90 [Sr-90] check source). We therefore recommend that the Navy review those results with respect to variability in background or other factors when considering its approach to confirmation sampling for trench units and overburden units originating in Parcel D-2. Fallout Cs-137 is known to concentrate in runoff areas and watershed sediments, for example.

2. **Section 4, Findings and Recommendations:** The Navy is recommending confirmation sampling at nine trench units in Parcel UC-1 and eight trench units in Parcel UC-2. As referenced in this Findings Report and shown on Photo 4-1 of the Navy's 2011 Radiological Removal Action Report (attached), a serpentine bedrock formation is present close to the ground surface at Parcels UC-1 and UC-2. We note that resampling bedrock would be a conservative course of action at these parcels, as it would be reasonable to presume that the bedrock would have provided a substantial barrier in the hypothetical scenario of leakage of contamination from the former sanitary sewers and storm drains.

3. **Section 4, Findings and Recommendations**: Given that import material was used for backfill at certain trench units, please clarify whether confirmation sampling is recommended for the backfill at Parcel D-2 SUs 31, 134, and 135; Parcel UC-1 SUs 167 and 171; and Parcel UC-3 SUs 166, 170, and 172.

4. **Section 4, Findings and Recommendations**: For several trench units recommended for confirmation sampling in Parcels UC-1 and UC-2, the Navy includes the following text: "The SUPR stated that the gamma scan data exceeded the investigation level...and that additional surveys were performed. However, based on the narrative provided in the SUPR, no additional surveys were performed." For clarity, please consider rephrasing the second statement as "However, based on lack of supporting evidence in the SUPR, it is assumed that the additional surveys were not in fact performed," or as appropriate.

5. **Section 4.1.1.1, Parcel D-2 Trench Units Recommended for Confirmation Sampling, Trench Unit 135, Page 4-2, Second bullet:** The second bullet states that data from TU 135 were flagged as unusual or suspect because "TU 35 is located downstream from a radiologically impacted building." While we agree that Building 813 was designated as radiologically impacted in the HRA, the HRA designates potential for contamination of drainage systems as "none" and potential for drainage systems as a migration pathway as "none." Please clarify this distinction in the text. A similar distinction should be made regarding Parcel UC-3 TUs 166 and 177, which are stated as downstream of Buildings 830 and 820, respectively, and whose drainage systems were not designated as impacted by the HRA.

6. **Section 4.1.2, Parcel D-2 Fill Units, page 4-3:** Please identify the origin of overburden unit 141. Did it also originate from Parcel D-2 SUs? The origin is unclear in the Navy's 2011 Radiological Removal Action Completion Report (Revision 2).

7. **Section 4.2.1.1, Parcel UC-1 Trench Units, Trench Units 143, page 4-4:** For consistency with prior reports, including the Navy's 2011 Radiological Removal Action Report for Parcels UC-1 and UC-2, please consider including TU 143 under Parcel UC-2.

8. **Section 4 Figures:** Please consider labeling radiologically impacted buildings referenced by the text as being upstream of unusual or suspect trench units.

Sincerely,

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